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Figure 1

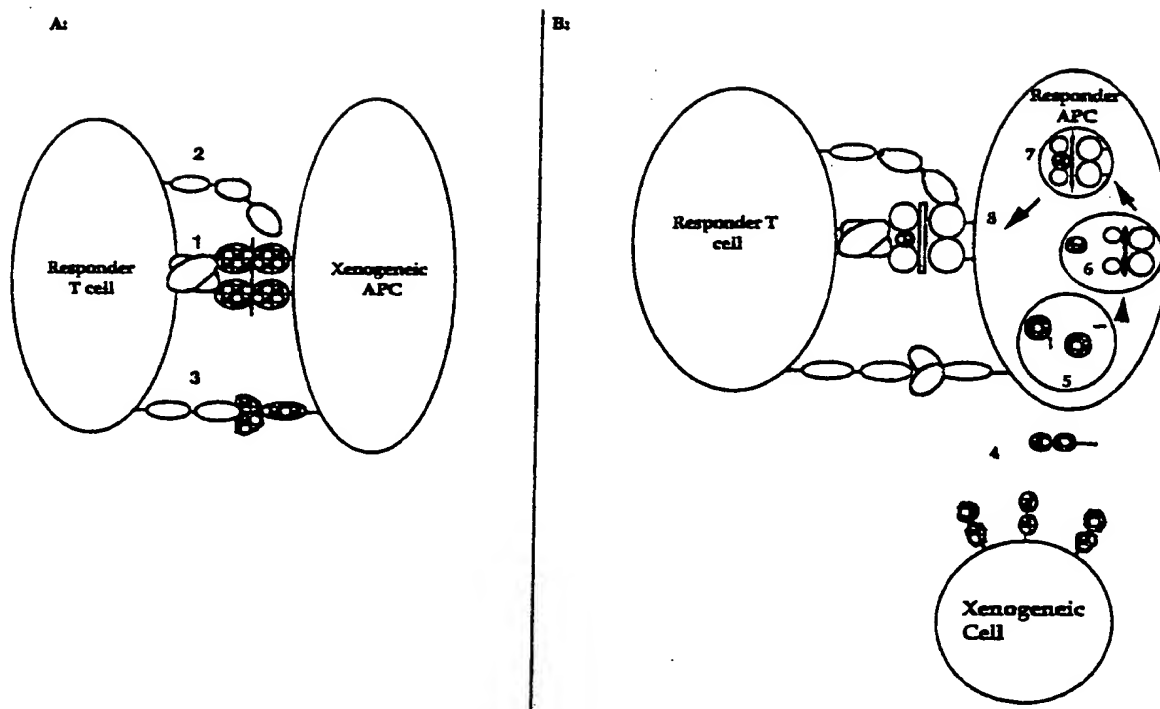


Figure 2

GCATGGATCCATGGGACTGAGTAACATTCTCTTTG

1 **ATGGGACTGAGTAACATTCTCTTTGTGATGGTCCTCCT**

39 GCTCTCTGGTGCTGCCTCCTTGAAAAGTCAGGCATATTTCAATGAGA

86 CTGGAGAACTGCCGTGCCATTTTACAAACTCGCAGAACCTAAGCCTG

133 GATGAGCTGGTCATATTTTGGCAGGACCAGGATAACCTGGTTCTCTA

181 CGAGCTATACCGAGGCCAAGAGAAGCCTCATAATGTTAATTCCAAG

227 TATATGGGTTCGCACAAGCTTTGACCAGGCCACCTGGACCCTGAGACT

274 CCACAACGTTCAAATCAAGGACAAGGGCTCATATCAATGTTTCATC

321 CATCATAAAGGGCCGCATGGACTTGTTCCCTATCCACCAGATGAGTTC

368 TGACCTATCATTGCTTGCTAACTTCAGTCAACCTGAAATAAACCTAC

415 TTACTAATCACACAGAAAATTCTGTCATAAATTTGACCTGCTCATCT

462 ACACAAGGCTACCCAGAACCCCAGAGGATGTATATGTTGCTAAATA

509 CGAAGAATTCAACCACTGAGCATGATGCTGACATGAAGAAATCTCA

556 AAATAACATCACGGA ACTCTACAATGTATCAATCAGGGTGTCTCTT

602 CCCATCCCTCCCGAGACAAATGTGAGCATCGTCTGTGTCCTGCAACTT

649 GAGCCAAGCAAGACACTGCTTTTTCTCCCTACCTTGTAATATAGATGC

696 AAAGCCACCTGTGCAACCCCCCTGTCCCAGACCACATCCTCTGGATTGC

743 AGCTCTACTTGTAACAGTGGTTCGTTGTGTGTGGGATGGTGTCTTTGT

790 AACACTAAGGAAAAGGAAGAAGAAGCAGCCTGGCCCCCTCTAATGA

837 ATGTGGTGAAACCATCAAAATGAACAGGAAGGCGAGTGAACAAAC

884 TAAGAACAGAGCAGAAGTCCATGAACGATCTGATGATGCCCAGTGT

931 GATGTTAATATTTTAAAGACAGCCTCAGATGACAACAGTACTACAG

GACAACAGTACTACAG

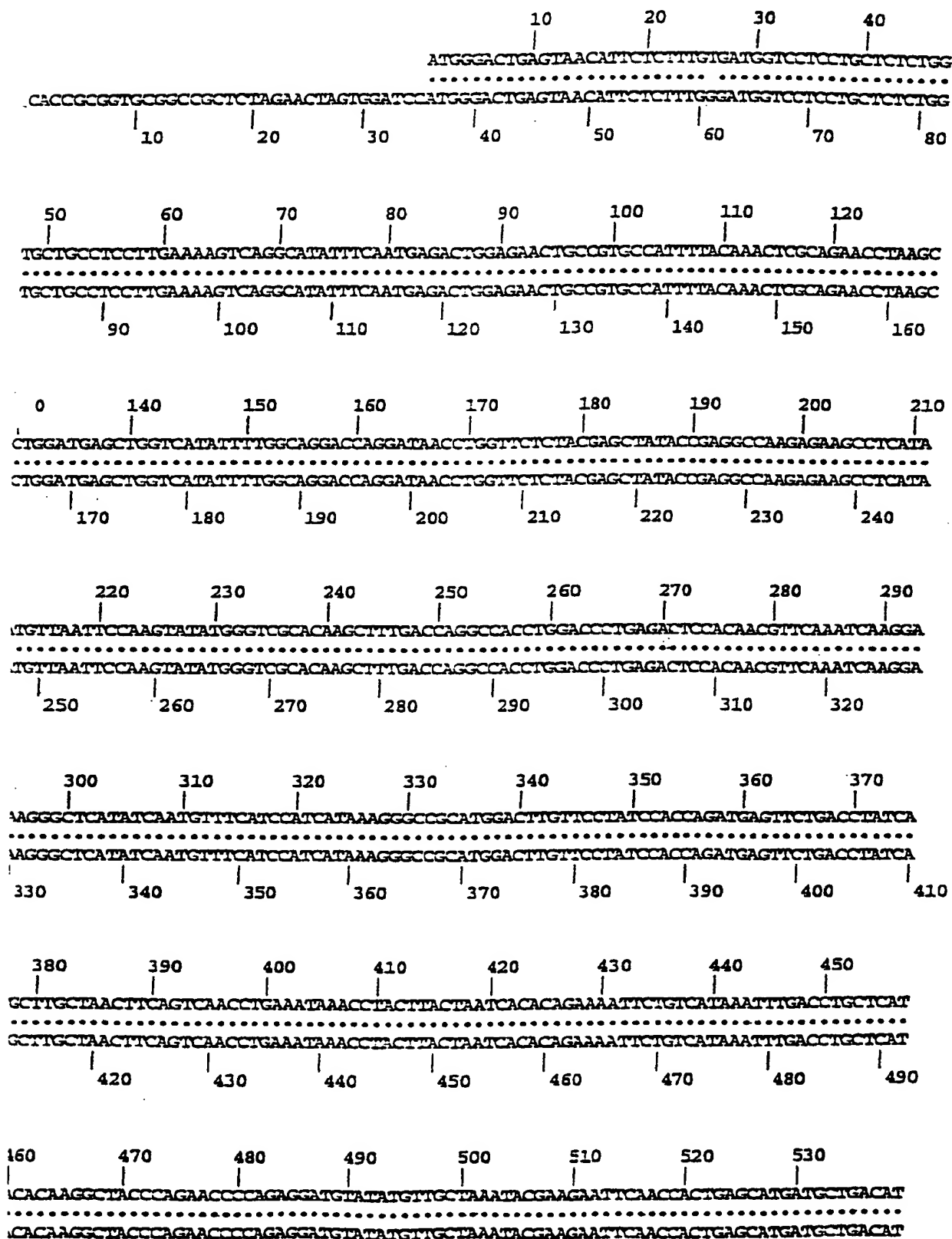
978 **ATTTTTAATTAAAGAGTAAACTCC**

ATTTTTAAGTCGACATGC

Figure 3

1 CACCGCGGTG CGGCCGCTCT AGAACTAGTG GATCCATGGG ACTGAGTAAC
51 ATTCTCTTTG GGATGGTCCT CCTGCTCTCT GGTGCTGCCT CCTTGAAAAG
101 TCAGGCATAT TTCAATGAGA CTGGAGAACT GCCGTGCCAT TTTACAAACT
151 CGCAGAACCT AAGCCTGGAT GAGCTGGTCA TATTTTGGCA GGACCAGGAT
201 AACCTGGTTC TCTACGAGCT ATACCGAGGC CAAGAGAAGC CTCATAATGT
251 TAATTCCAAG TATATGGGTC GCACAAGCTT TGACCAGGCC ACCTGGACCC
301 TGAGACTCCA CAACGTTCAA ATCAAGGACA AGGGCTCATA TCAATGTTTC
351 ATCCATCATA AAGGGCCGCA TGGACTTGTT CCTATCCACC AGATGAGTTC
401 TGACCTATCA GTGCTTGCTA ACTTCAGTCA ACCTGAAATA AACCTACTTA
451 CTAATCACAC AGAAAATTCT GTCATAAATT TGACCTGCTC ATCTACACAA
501 GGCTACCCAG AACCCAGAG GATGTATATG TTGCTAAATA CGAAGAATTC
551 AACCCTGAG CATGATGCTG ACATGAAGAA ATCTCAAAAT AACATCACGG
601 AACTCTACAA TGTATCAATC AGGGTGTCTC TTCCCATCCC TCCCGAGACA
651 AATGTGAGCA TCGTCTGTGT CCTGCAACTT GAGCCAAGCA AGACACTGCT
701 TTTCTCCCTA CCTTGTAATA TAGATGCAAA GCCACCTGTG CAACCCCTG
751 TCCCAGACCA CATCCTCTGG ATTGCAGCTC TACTTGTAAC AGTGGTCGTT
801 GTGTGTGGGA TGGTGTCCCT TGTAACACTA AGGAAAAGGA AGAAGAAGCA
851 GCCTGGCCCC TCTAATGAAT GTGGTGAAAC CATCAAAATG AACAGGAAGG
901 CGAGTGAACA AACTAAGAAC AGAGCAGAAG TCCATGAACG ATCTGATGAT
951 GCCCAGTGTG ATGTTAATAT TTTAAAGACA GCCTCAGATG ACAACAGTAC
1001 TACAGATTTT TAAGTCGACC TCGAGGGGGG GCCCGGTACC AGCTTTTGTT

Figure 4: Comparison of the nucleotide sequence of CD86(i) with the published sequence for porcine CD86.



540 550 560 570 580 590 600 610 620
GAAGAAATCTCAAATAACATCACGGAACCTCTACAATGTATCAATCAGGGTGTCTCTTCCCATCCCTCCCGAGACAAATGTG
.....
GAAGAAATCTCAAATAACATCACGGAACCTCTACAATGTATCAATCAGGGTGTCTCTTCCCATCCCTCCCGAGACAAATGTG
580 590 600 610 620 630 640 650

630 640 650 660 670 680 690 700
AGCATCGTCTGTGTCTTGAACCTTGAGCCAAGCAAGACACTGCTTTTCTCCCTACCTTGTAAATATAGATGCAAAGCCACCTG
.....
AGCATCGTCTGTGTCTTGAACCTTGAGCCAAGCAAGACACTGCTTTTCTCCCTACCTTGTAAATATAGATGCAAAGCCACCTG
660 670 680 690 700 710 720 730

710 720 730 740 750 760 770 780
TGCAACCCCTGTGCCAGACCACATCTCTGGATTGACGCTCTACTTGTAAACAGTGGTCTGTGTGTGGGATGGTGTCTCTT
.....
TGCAACCCCTGTGCCAGACCACATCTCTGGATTGACGCTCTACTTGTAAACAGTGGTCTGTGTGTGGGATGGTGTCTCTT
740 750 760 770 780 790 800 810 820

790 800 810 820 830 840 850 860
TGTAACACTAAGGAAAAGGAAGAAGACAGCCCTGGCCCCCTCTAATGAATGTGGTGAACCATCAAAATGAACAGGAAGGCG
.....
TGTAACACTAAGGAAAAGGAAGAAGACAGCCCTGGCCCCCTCTAATGAATGTGGTGAACCATCAAAATGAACAGGAAGGCG
830 840 850 860 870 880 890 900

870 880 890 900 910 920 930 940
GTGAACAACTAAGAACAGAGCAGAAGTCCATGAACGATCTGATGATGCCAGTGTGATGTTAATATTTTAAAGACAGCCT
.....
GTGAACAACTAAGAACAGAGCAGAAGTCCATGAACGATCTGATGATGCCAGTGTGATGTTAATATTTTAAAGACAGCCT
910 920 930 940 950 960 970 980

960 970 980 990
AGATGCAACAGTACTACAGATTTTAAATTAAGAGTAACTCC
.....
AGATGCAACAGTACTACAGATTTTAAAGTCCGACCTCCAGGGGGGGCCCGTACCAGCTTTTGT
990 1000 1010 1020 1030 1040 1050

09868605.091201

FIGURE 5

Contig
Murine B7-2
Porcine CD68(i)
Human B7.2

ACCATGGGACTGAGTAACATTCTCTTTGTGATGGCTTCCTGCTCTCT
-CCATGGGACTGAGTAACATTCTCTTTGGGATGGCTCCTGCTCTCT
ACCATGGGCTTGGCAATCCTTATCTTTGTGACAGTCTTGCTGATCTCA
ACTATGGGACTGAGTAACATTCTCTTTGTGATGGCTTCCTGCTCTCT

GGTGTGCTTCCBTGAAGABTCAAGCTTATTTCAATGAGACTGCAGAHCTGCCGTGCCAATTTA
GGTGTGCTCCTTGAAGAGTCAAGCATATTTCAATGAGACTGGAGAACTGCCGTGCCAATTTA
GATGCTGTTTCCGTGGAGACGCAAGCTTATTTCAATGGGACTGCATATCTGCCGTGCCAATTTA
GGTGTGCTCCTTGAAGATTCAAGCTTATTTCAATGAGACTGCAGACCTGCCATGCCAATTGA

CAAACCTCTCAAAACCTAAGCCTGAGTGAGCTGGTAGTATTTTGGCAGGACCAGGAAAACCTTGGT
CAAACCTGCAGAACCTAAGCCTGGATGAGCTGGTCATATTTTGGCAGGACCAGGATAACCTTGGT
CAAAGGCTCAAAACATAAGCCTGAGTGAGCTGGTAGTATTTTGGCAGGACCAGCAAAGTTGGT
CAAACCTCTCAAAACCAAGCCTGAGTGAGCTAGTAGTATTTTGGCAGGACCAGGAAAACCTTGGT

TCTGTACGAGCTATACTTAGGCAAAGAGAACTTGATAGTGTAAATTCAGTATATGGGCCCG
TCTGTACGAGCTATACCGAGGCCAAGAGAAGCCTCATATGTAAATTCAGTATATGGGCCCG
TCTGTACGAGCACTATTTGGGCACAGAGAACTTGATAGTGTAAATTCAGTATATGGGCCCG
TCTGAATGAGGTATACCTTAGGCAAAGAGAAATTTGACAGTGTTCATTCAGTATATGGGCCCG

ACAAGCTTTGACHVGGACAVCTGGACCCCTGAGACTTCACAATGTTTCAGATCAAGGACAAGGGCT
ACAAGCTTTGACAGGCCACCTGGACCCCTGAGACTCCACAACGTTCAAATCAAGGACAAGGGCT
ACGAGCTTTGACAGGAACAACCTGGACTCTAGGACTTCACAATGTTTCAGATCAAGGACAAGGGCT
ACAAGTTTTGATTCGGACAGTTGGACCCCTGAGACTTCACAATCTTCAGATCAAGGACAAGGGCT

CGTATCAATGTTTTCATCCATCAHAAAVGCCACAGGAHTDATTTCBATCCACCAGATGADTTC
CATATCAATGTTTTCATCCATCAHAAAGGGCCGATGGACTTGTTCCTATCCACCAGATGAGTTC
CGTATGATTGTTTTATACAAAAAAGCCACCCACAGGATCAATTATCCTCCACAGACATTAAC
TGTATCAATGTATCATCCATCAHAAAGCCACAGGAATGATTGCTATCCACCAGATGAATTC

TGAAGTGTGAGTGTGCTTAACCTTCAGTCAACCTGAAATAAACTAVTTHCTAATVTAACAGAA
TGACCTATCAGTGTGCTTAACCTTCAGTCAACCTGAAATAAACTACTTACTAATCAACAGAA
AGAAGTGTGAGTGTGCTTAACCTTCAGTCAACCTGAAATAAACTGGCTCAGAAATGTAACAGAA
TGAAGTGTGAGTGTGCTTAACCTTCAGTCAACCTGAAATAGTACCAATTTCTAATATAACAGAA

FIGURE 7

10 20 30 40 50 60 70 80
CCAAAGAAAAAGTGATTGTGTCATTGCTTTATAGACTGTAAGAAGAGAACATCTCAGAAGTGGAGTCTTACCTTGAAATCAAA
GAGTTTATACCTCAATAGACT
10 20

90 100 110 120 130 140 150 160
GGATTAAAGAAAAAGTGAATTTTCTTCAGCAAGCTGTGAAACTAAATCCACAACCTTTGGAGACCCAGGAACACCTTCC
CTTACTAGTTTCTCTTTTTCAGGTGTGAAACTCAACCTTCAAAGACACTCTGTTCCTTTCTGTGGACTAATAGGATCATC
30 40 50 60 70 80 90 100

170 180 190 200 210 220 230 240
AATCTCTGTGTGTTTGTAAACATCACCTGGAGGGTCTTCTACGTGAGCAATTGGATTGTTCATCAGCCCTGCTGTGTTTGCAC
TTTAGCATCTGCCGGGTGGATGCCATCCAGGCTTCTTTTCTACATCTCTGTTCTCGATTMTTGTGAGCCTAGGAGGTGCC
110 120 130 140 150 160 170 180

250 260 270 280 290 300 310 320
CTGGGAAGTGCCCTGGTCTTACTTGGGTCCAAATTGTTGGCTTTCACTTTTGACCTAAGCATCTGAAGCCATGGGCCACAC
TAAGCTCCATTGGCTCTAGATTCTGGCTTTCCCCATCATGTTCTCCAAAGCATCTGAAGCTATGGCTTGCAATTGTGAGTT
190 200 210 220 230 240 250 260

330 340 350 360 370 380 390 400 410
ACGGAGGCAGGGAACATCACCATCCAAAGTGTCCATACCTCAATTTCTTTCAGCTCTTGGTGCTGGCTGGTCTTTCTCACTTC
GATGCAGGATACACCACTCTCAAGTTCCATGTCCAAAGGCTCATCTCTCTTGTGCTGCTGATTGCTCTTTCACAAGTG
270 280 290 300 310 320 330 340 350

420 430 440 450 460 470 480 490
TGTTCAAGGTGTTATCCACGTGACCAAGGAAGTGAAGAAGTGGCAACGCTGTCTGTGGTCACAATGTTTCTGTTGAAGAC
TCTTCAGATGTTGATGAACAACCTGTCCAAGTCAGTGAAGATAAGGTATGCTGCCTTGCCGTTACAACCTCTCCTCATGAAG
360 370 380 390 400 410 420 430

500 510 520 530 540 550 560 570
TGGCACAAGTCTGCTCTACTGGCAAAAGGAGAAGAAATGGTGCTGACTATGATGCTCTGGGGACATGAATATATGGCCCGA
ATGAGTCTGAAGACCGAATCTACTGGCAAAACATGACAAAGTGGTGCTGTCTGTCTATGCTGGGAACTAAAAGTGTGGCC
440 450 460 470 480 490 500 510

FIGURE 5-1

Contig
Murine B7-2
Porcine CD68(i)
Human B7.2

AATTCTGDCATAAATTTGACCTGCTCATCTAHACAAGGTTACCCAGAACCTAAGAAGATGTATD
AATTCGTGCATAAATTTGACCTGCTCATCTACACAAGGCTACCCAGAACCCAGAGGATGTATA
AATTCCTGGCATAAATTTGACCTGCACGCTCTAAGCAAGGTCACCCGAAACCTAAGAAGATGTATT
AATGTGTACATAAATTTGACCTGCTCATCTATACACGGTTACCCAGAACCTAAGAAGATGAGTG

TTTGTCTAAVTACNAAGAAATCAACTAHTGAGTATGATGVTAAACATGCAGAAATCTCAAGATAA
TGTGTCTAAATACGAAGAATTCAACCACTGAGCATGATGCTGACATGAAGAAATCTCAAAATAA
TTCTGATAACT-----AATTCAACTAATGAGTATGGTGATAACATGCAGATATCAAGATAA
TTTGTCTAAGAACCAAGAATTCAACTATCGAGTATGATGGTATTATGCAGAAATCTCAAGATAA

TGTCACAGAACTGTACAATGTETCCATCAGCBTGTCTCTTTTCATTCCCTGATGDTACGAGNNAT
CATCAGGAACTCTACAATGTATCAATCAGGGTGTCTCTTCCCATCCCTCCCGAGACAA---AT
TGTCACAGAACTGTTCAGTATCTCCAACAGCCTCTCTCTTTTCATTCCCGGATGGTGTGTGGCAT
TGTCACAGAACTGTACGACGTTTCCATCAGCTTGTCTGTTTCATTCCCTGATGTTACGAGCAAT

ATGACCATCGTCTGTGTTCTGGAACTGAGNCAANCAAGACNCGCTTTTCTCCHACCTTTCA
GTGAGCATCGTCTGTGTTCTGCAACTTGAGCCAAGCAAGACACTGCTTTTCTCCCTACCTTGTA
ATGACCGTGTGTGTGTTCTGGAAACGGAGTCAATGAAGA-----TTTCTCTCAAACCTCTCA
ATGACCATCTTCTGTATTCTGGAACTGA-----CAAGACGGCGCTTTTATCTTCACTTTCT

ATATAGATCHAGAGEBHCCTNNNCAACCTCCCTNNCCAGACCACATBCNNTGGATTACAGCTBT
ATATAGATGCAAAGCCACCTGTGCAACCCCTGTGCCAGACCATCCTCTGGATTGCAGCTCT
ATTTCACTCAAGAGTTTCC-----ATCTCCTCAAACGTATTGGAAG---GAGATTACAGCTTC
CTATAGAGCTTGAGGACCT---CAGCCTCC---CCAGACCACATTCTTGGATTACAGCTGT

ACTTNNACAGTGGTCVTTVTGTGTGATGGTGTCTTNTVTAATCTATGGAAANNNAAGAAG
ACTTGTAAACAGTGGTGGTGTGTGTGGGATGGTGTCTTTGTAACACTAAGGAAA---AGGAAG
AGTT---ACTGTGGCCCTCTCCCTGTGTGATGCTGCTC---ATCATTGTATG---TCACAAGAAG
ACTTCCAACAG---TTATTATATGTGTGATGGTTTTCTGTCTAATTCTATGGAAATGGAAGAAG

AAGAAGCAGCCTVGCATCTCTAATAAATGTGGNNNAACCAHCAAAATGGAGAGGGANGNGAGTG
AAGAAGCAGCCTGGCCCTCTTAATGAATGTGGTGAAACCATCAAAATGAACAGGAAGGCGAGTG
CCGAATCAGCCTAGCAGGCCAGCAA-----CACAGCCTCTAAGTTAGAGCGGGA---TAGT-
AAGAAGCGGCTCGCAACTCTTATAAATGTGG---AACCAACACAATGGAGAGGGAAGAGAGTG

AACANACTAAGAACAGAGAAAAANTCCATNNACCTGAAVGATCTGATGAAGCCAGNGTGNNT
AACAAACTAAGAACAGAGCAGAAGTCCAT-----GAACGATCTGATGATGCCAGTGTGATGT
AACG---CTG---ACAGAGAGA---CTATCAACCTGAAGGAACT---TGAACCCCA-----
AACAGACCAAGAAAAGAGAAAAAATCCATATACCTGAAAGATCTGATGAAGCCAGCGTGTITT

TAANADTTNNAAGACAGCTTCANNNGACAAAAGTNNACANNTTTTTAADTNNAGAGTNAAGNN
TAATATTTTAAAGACAGCCTCAGATGACAACAGTACTACAGATTTTAAAGT-----
-----AATT-----GCTTCA-----GCAAAA-----CCAAATGCAGAGTGAAG--
TAAAAGTTTGAAGACATCTTCATGCCACAAAAGTGATACATGTTTTTAATTAAAGAGTAAAGCC

FIGURE 6

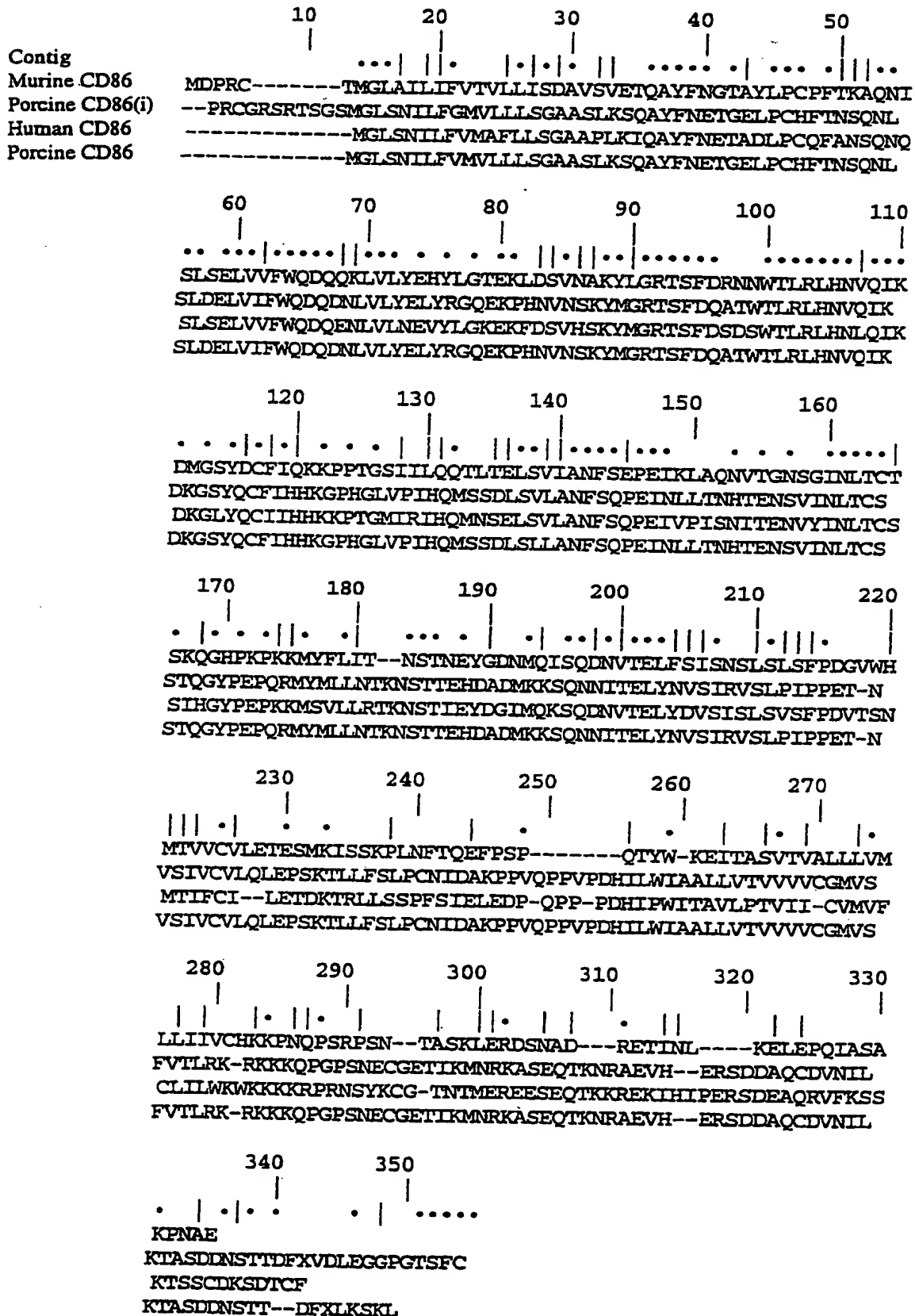


FIGURE 7-1

580 590 600 610 620 630 640 650
GTACAAGAACCGGACCATCTTTGATATCACTAATAACCTCTCCATTGTGATCCTGGCTCTGCGCCCATCTGACGAGGGCACA
CGAGTATAAGAACCGGACTTTATATGACAACACTACCTACTCTCTTATCATCCTGGGCCTGGTCCTTTTCAGACCGGGGCACA
520 530 540 550 560 570 580 590

660 670 680 690 700 710 720 730
TACGAGTGTGTGTCTGAAGTATGAAAAAGACGCTTTCAAGCGGGAACACCTGGCTGAAGTGACGTTATCAGTCAAAGCTG
TACAGCTGTGTCTGTTCAAAGAGGAAAGAGGAACGTATGAAGTTAAACACTTGGCTTTAGTAAAGTTGTCCATCAAAGCTG
600 610 620 630 640 650 660 670

740 750 760 770 780 790 800 810 820
ACTTCCCTACACCTAGTATATCTGACTTTGAAATTCCTACTCTAATATTAGAAGGATAATTGCTCAACCTCTGAGGTTT
ACTTCTCTACCCCCAACATAACTGAGTCTGGAAACCCATCTGCAGACACTAAAAGGATTACCTGCTTTGCTTCCGGGGGTTT
680 690 700 710 720 730 740 750 760

830 840 850 860 870 880 890 900
TCCAGAGCCTCACCTCTCCTGGTGGAAAATGGAGAAGAATTAAATGCCATCAACACAACAGTTTCCCAAGATCCTGAACT
CCCAAAGCCTCGCTCTCTTGGTGGAAAATGGAAGAGAATTACCTGGCATCAATACGACAATTTCAGGATCCTGAATCT
770 780 790 800 810 820 830 840

910 920 930 940 950 960 970 980
GAGCTCTATGCTGTAGCAGCAAACTGGATTTCATATGACAACCAACCACAGCTTCATGTGTCTCATCAAGTATGGACATT
GAATTGTACACCATTAGTAGCCAACCTAGATTTCATACGACTCGCAACCACACCATTAAAGTGTCTCATTAATATGGAGATG
850 860 870 880 890 900 910 920

990 1000 1010 1020 1030 1040 1050 1060
TAAGAGTGAATCAGACCTTCAACTGGAATACAACCAAGCAAGAGCATTTCCTGATAACCTGCTCCCATCCTGGGCCATTAC
CTCACGTGTGAGGAGCTTCACCTGGGAAAAACCCCAAGACCCCTCTGATAGCAAGAACAACCTGTGTCTCTTTGGGGC
930 940 950 960 970 980 990 1000

1070 1080 1090 1100 1110 1120 1130 1140
CTTAATCTCAGTAAATGGAATTTTGTGATATGCTGCCTGACCTACTGCTTTGCCCAAGATGCAGAGAGAGAAGGAGGAAT
AGGATTCGGCGCAGTAATAACAGTCGTCGTCATCGTTGTCTCATCAAATGCTTCTGTAAGCACAGAAGCTGTTTCAGAAGA
1010 1020 1030 1040 1050 1060 1070 1080

FIGURE 7-2

1150 1160 1170 1180 1190 1200 1210 1220 1230
GAGAGATTGAGAAGGGAAAGTGTACCCCTGTATAACAGTGTCCGAGAGCAAGGGGCTGAAAAGATCTGAAGGTAGCCTC
AATGAGGCAAGCAGAGAAACAAACAACAGCCTTACCTTCGGGCCTGAAGAAGCATTAGCTGAACAGACCGTCTTCCTTTAGT
1090 1100 1110 1120 1130 1140 1150 1160 1170

1240 1250 1260 1270 1280 1290 1300 1310
CGTCATCTCTTCTGGGATACATGGATCGTGGGATCATGAGGCATTCTCCCTTAACAAATTAAGCTGTTTACCCACTAC
TCTTCTCTGTCCATGTGGGATACATGGTATTAATGTGGCTCATGAGGTACAATCTTTCTTTCAGCACCGTGCTAGCTGATCTT
1180 1190 1200 1210 1220 1230 1240 1250

1320 1330 1340 1350 1360 1370 1380 1390
CTCACCTTCTTAAAACTCTTTTCAGATTAAAGCTGAACAGTTACAAGATGGCTGGCATCCCTCTCCTTTCTCCCCATATGCA
TCGGACAACCTTGACACAAGATAGAGTTAACTGGGAAGAGAAAGCCTTGAATGAGGATTCTTTCCATCAGGAAGCTACGGGC
1260 1270 1280 1290 1300 1310 1320 1330

1400 1410 1420 1430 1440 1450 1460 1470
ATTGCTTAATGTAACCTCTCTTTTGCCATGTTTCCATCTGCCATCTTGAATGTCTTGTGTCAGCCAATTCATTATCTATT
AAGTTTGCTGGGCCCTTGATGCTTGATGACTGAAGTGGAAAGGCTGAGCCCACCTGTGGGTGGTGCTAGCCCTGGGCAGGGG
1340 1350 1360 1370 1380 1390 1400 1410

1480 1490
AAACACTAATTTGAG
CAGGTGACCTGGGTGTATAAGAAAAAGAGCTGTCACTAAAGGAGAGGTGCCTAGTCTTACTGCAACTTGATATGTCATG
1420 1430 1440 1450 1460 1470 1480 1490

TTTGGTGGTGTCTGTGGGAGGCTGCCCTTTTCTGAAGAGAAGTGGTGGGAGAGTGGATGGGGTGGGGGCAGAGGAAAAGT
1500 1510 1520 1530 1540 1550 1560 1570 1580

GGGGGAGAGGGCTGGGAGGAGAGGAGGGAGGGGGACGGGGTGGGGTGGGGAAAACATGCTTGGGATGTAAAAACGGATA
1590 1600 1610 1620 1630 1640 1650 1660

[illegible]

SUBSTITUTE SHEET (RULE 26)

FIGURE 8a-1

Contig AGDVTGGATGAGAGCCCTGGTGGTATCCCCGTCATGATGGGVATCCGTGTTGCCATCCTCTTTGGTG
Human CD40 AGGATCGGCTGAGAGCCCTGGTGGTATCCCCATCATCTTCGGGATCCTGTTTGCCATCCTCTTTGGTG
Bovine CD40 AGAGTCGGATGAGGACCCCTGGTGGTATCCCCGTCACGATGGGAGTCTTGTGCTGTCTGTTGGTA
Mouse CD40 AGTCCCGGATGCGAGCCCTGCTGGTCACTTCCTGTGCTGATGGGCATCCTCATCACCATTTCGGGGTG

690 700 710 720 730 740
Contig TTTGTCCTATCAAAAAGGTGGCCAAGAAGCCAACVGATAANNNGGCCCTVCACCCCTANGGCTNNANG
Human CD40 CTGGTCTTTATCAAAAAGGTGGCCAAGAAGCCAACCAATAA---GGCCCCCACCCTA-----A
Bovine CD40 TCTGCCTGTATCAGGAACATAACCAAGAAGC---GGCAGCTAA---GGCCCTGCACCCCTATGGCTGAAAG
Mouse CD40 TTTCTCTATATCAAAAAGGTGGTCAAGAAACCAAGGATAATGAGATGTTACCCCTGCGGCTCGACG

750 760 770 780 790 800 810
Contig GCAGGATCCCCCAGGAGATGANNNNTCCNGAVGATTTTCCCGGCCCAACACCGCTGCTCCAGTGCAGG
Human CD40 GCAGGAACCCCAAGGATCAATTTTCCCGACGATCTTCCTGGCTCCAACACTGCTGCTCCAGTGCAGG
Bovine CD40 GCAGGATCCCCGTGGAGACGATGATCCCGAGGATTTTCCCGGCCCAAC---CCGCTCTCCGGTGCAAG
Mouse CD40 GCAAGATCCCCCAGGAGATG-----GAAGATTATCCCGGTCAACACCGCTGCTCCAGTGCAGG

820 830 840 850 860 870 880
Contig AGACHTTACACGGGTGTCAGCCGGTCACCCAGGAGGATGGCAAAGAGAGTCCCATCTCAGTGCAGGAG
Human CD40 AGACTTTTACATGGATGCCAACCGGTACCCAGGAGGATGGCAAAGAGAGTCCCATCTCAGTGCAGGAG
Bovine CD40 AGACCTTATGCTGGTGTGTCAGCCGGTCCGCCAGGAGGACGGCAAAG
Mouse CD40 AGACACTGCACGGGTGTCAGCCTGTGACACAGGAGGATGGTAAAGAGAGTCCCATCTCAGTGCAGGAG

890 900 910 920 930 940 950
Contig CGGCAGGTGACAGACAGCATAGCCTTGAGGCCCTGGTCTGACCCCTGGAACYGCTTYRGRRGYATG
Human CD40 -----AGACAG-----TGAGGC-----TGACCC-----ACC-----CAGGAGTG-TG
Mouse CD40 CGGCAGGTGACAGACAGCATAGCCTTGAGGCCCTGGTCTGAACCCCTGGAAGTGCCTTGGAGGCGATG

960 970 980 990 1000 1010 1020
Contig# 1 GCYRCTGCTGACCTTTGAAGTTTGAGRTGRCGAARACAGAGCCAGTGCAGYTRRCYCTCATGCCT
Human CD40 GCCAC-----GTGGGC-----AAACAG-----GCAGTTGGCC-----
Mouse CD40 GCTGCTGCTGACCTTTGAAGTTTGAGATGAGCCAAGACAGAGCCAGTGCAGCTAACTCTCATGCCT

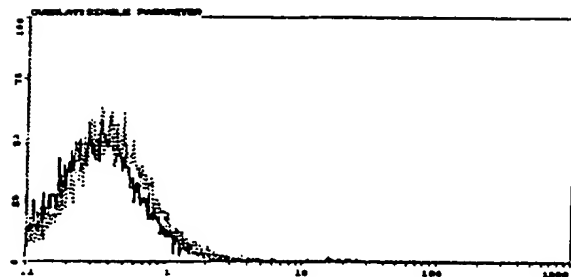
FIGURE 8b

	10	20	30	40	50	60
Contig	..	..	..	..	..	..
bovine CD40 protein	MVRLPLQCLFWGFFLTAVHSE	PATACGEKQYFVNSLCCDL	CPFGOKLVNDCTEVSKTECQ			
human CD40 protein	MVRLPLQCVLWGCLLTAVHPE	PPTACREKQYLINSQCCSL	CQFGOKLVSDCTEFTETECL			
murine CD40 protein	MVSLPRLCALWGCLLTAVHLG	QCVTCSDKQYLHDGQCCL	CQFGSRLTSHCTALEKTQCH			
	70	80	90	100	110	120
Contig	|.	|.	|.	|.	|.	|.
bovine CD40 protein	SCGKGEFLSTWNREKYCHEH	RYCNPNLGLRIQSEGT	LNITDTCVCEGQHCTSH	TCESECT		
human CD40 protein	PCGESEFLDTWNRETHCHQ	HKYCDPNLGLRVQQKGT	SETDITICTCEGWHCTSE	ACESC		
murine CD40 protein	PCDSGEFSAQWNREIRCHQ	HRHCEPNQGLRVKKEGT	AESDVTCTCKEGQHCTSK	DCEACA		
	130	140	150	160	170	180
Contig	..	..	..	..	..	..
bovine CD40 protein	PHSLCLPGFGVKQIATGL	LDIVCEPCPLGFFSNVSS	AFEKCHRWTS	CERKGLVEQHVGTN		
human CD40 protein	LHRSCSPGFGVKQIATG	VSDTICEPCFVGFFSNVSS	AFEKCHPWTSC	ETKDLVVQAGTN		
murine CD40 protein	QHTPCIPGFGVMEMATET	TDIVCHPCFVGFFSNQSS	LFKCYFWTSC	EDKNLEVLQKGS		
	190	200	210	220	230	240
Contig	|.	|.	|.	|.	|.	|.
bovine CD40 protein	KTDVVC	GFQSRMRILVVIPVIM	GVLFVLLVSACIRNIT	TK-----	RQLRPCTL	
human CD40 protein	KTDVVC	GPQDRLRALVVIPVIF	IGILFAILLVLFIRK	VAKGPTNKAPHP----	KQEPQEI	
murine CD40 protein	QTNVIC	GLKSRMRALLVIVVM	GILITIFGVFLYIKK	VVKPKDNEMLP	PAARRQDPQEM	
	250	260	270	280		
Contig	|.	|.	|.	|.	.....
bovine CD40 protein	WLKGRIPWRL---	IRRIFFA--	PTRLSGARDLMLV	SAGRPGGRQ		
human CD40 protein	NFPDDLPGSNIAAPVQ	ETLHGCQPV	TQEDGKESRISVQERQ			
murine CD40 protein	---EDYPGHNTAAPVQ	ETLHGCQPV	TQEDGKESRISVQERQ	VTD	SIALRPLV	

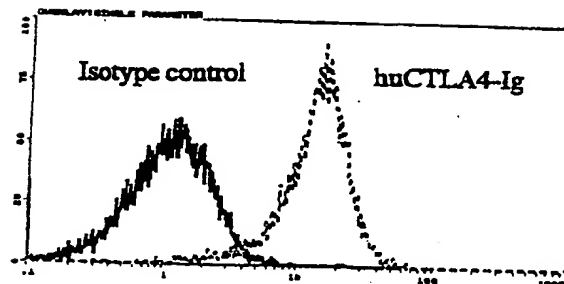
FIGURE 9

A

Non-transfected control cells

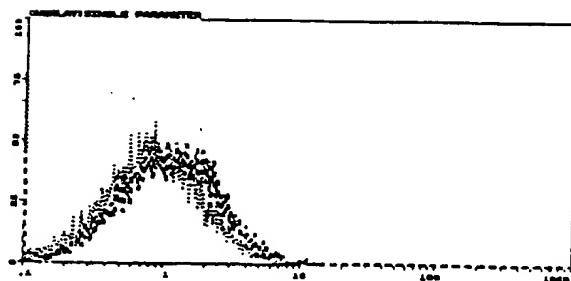


Transfected cells



B

Non-transfected control cells



Transfected cells

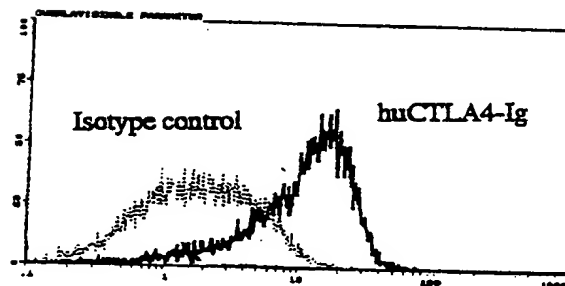
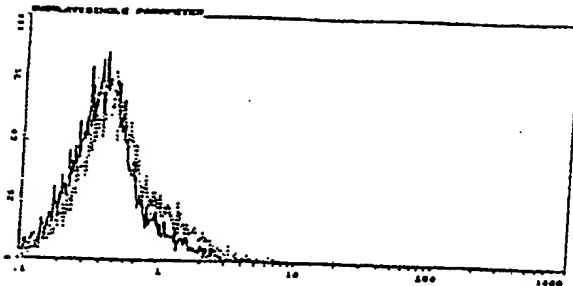
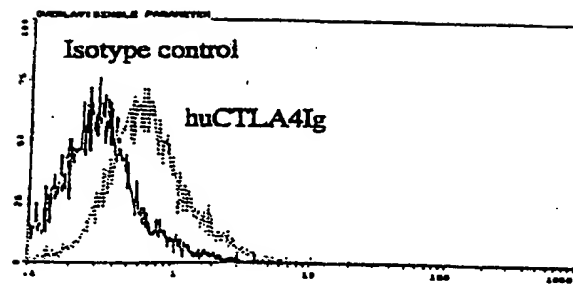


FIGURE 10

Non-transfected control cells



Transfected cells



Non-transfected control cells



Transfected cells

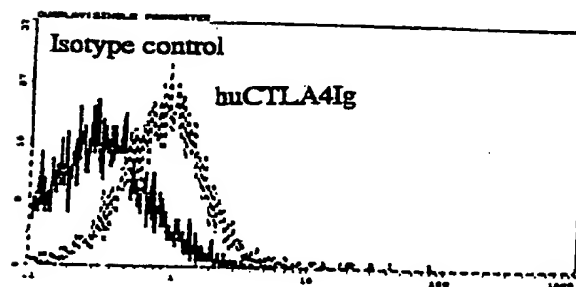
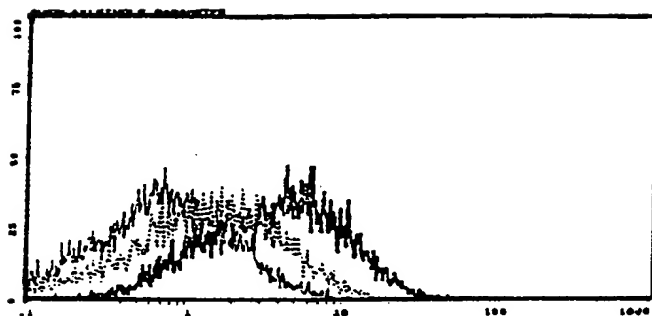


FIGURE 11

A



B

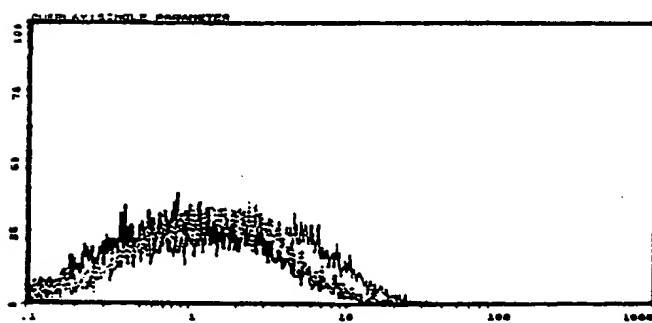
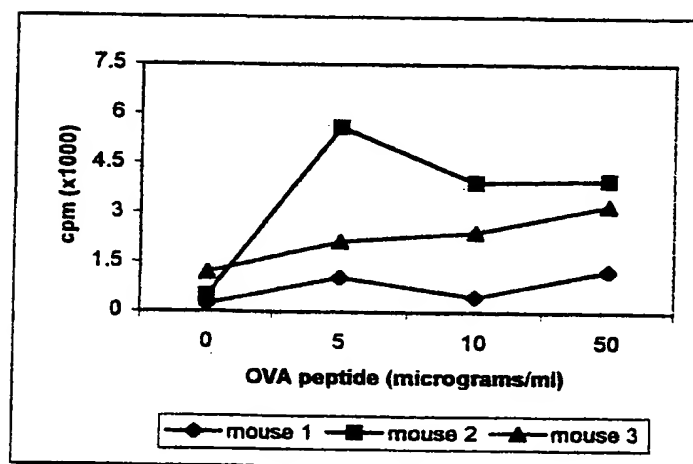
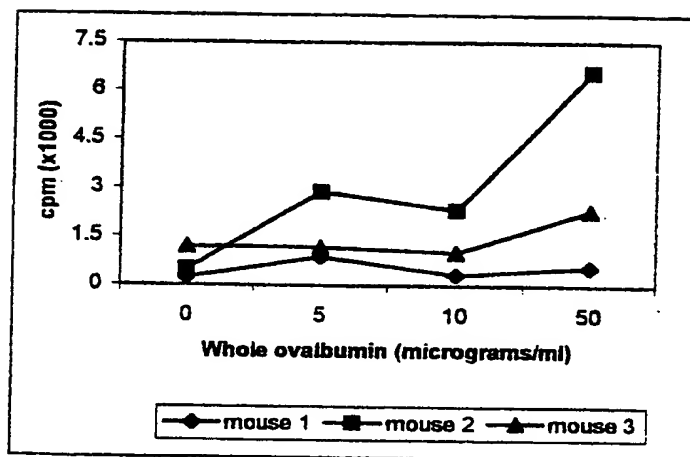


FIGURE 12

1 MGLSNILFVM VLLLSGAASL KSQAYFNETG ELPCHFTNSQ
41 NLSLDELVIF WQDQDNLVLY ELYRGQEKPH NVNSKYMGR
81 SFDQATWTLR LHNVQIKDKG SYQCFIHHKG PHGLVPIHQM
121 SSDLSLLANF SQPEINLLTN HTENSVINLT CSSTQGYPEP
161 QRMYYMLLNTK NSTTEHDADM KKSQNNITEL YNVSIRVSLP
201 IPPETNVSIV CVLQLEPSKT LLFSLPCNID AKPPVQPPVP
241 DHILWIAALL VTVVVVCGMV SFVTLRKRKK KQPGPSNECG
281 ETIKMNRKAS EQTKNRAEVH ERSDDAQCDV NILKTASDDN
321 STTDF•LKSK L

[illegible]

FIGURE 13



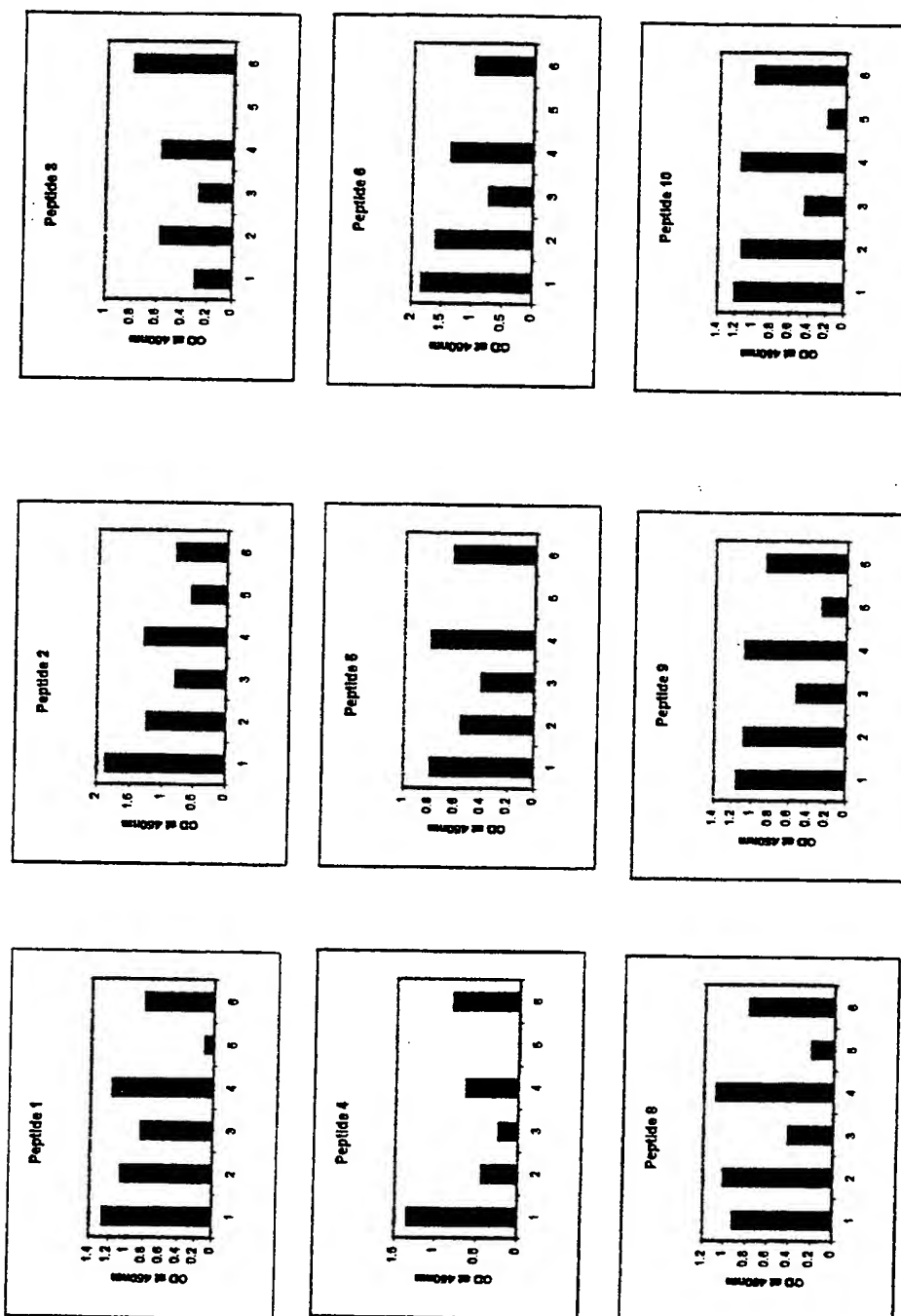


Figure 14a

FIGURE 14b

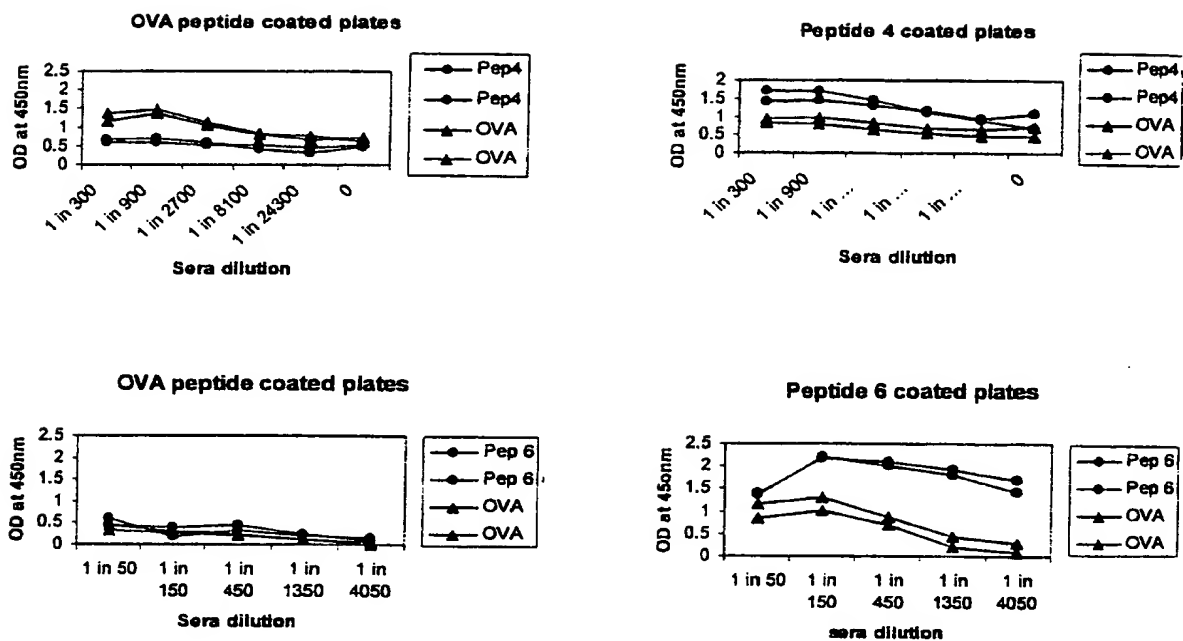


FIGURE 15a

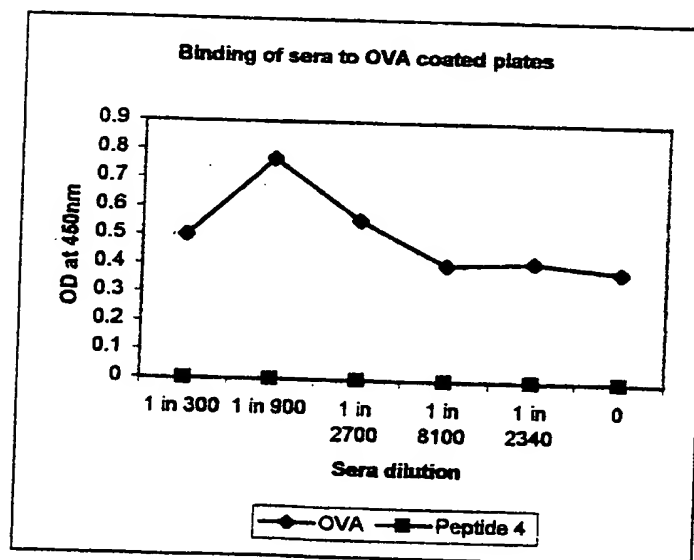
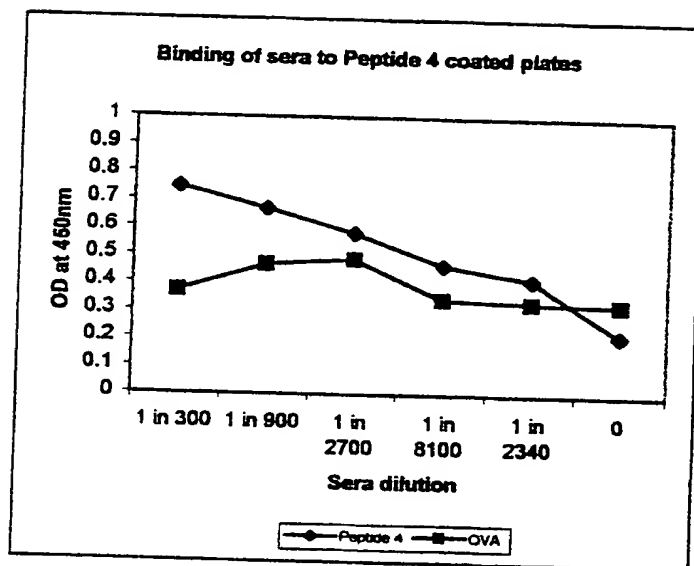


FIGURE 15b

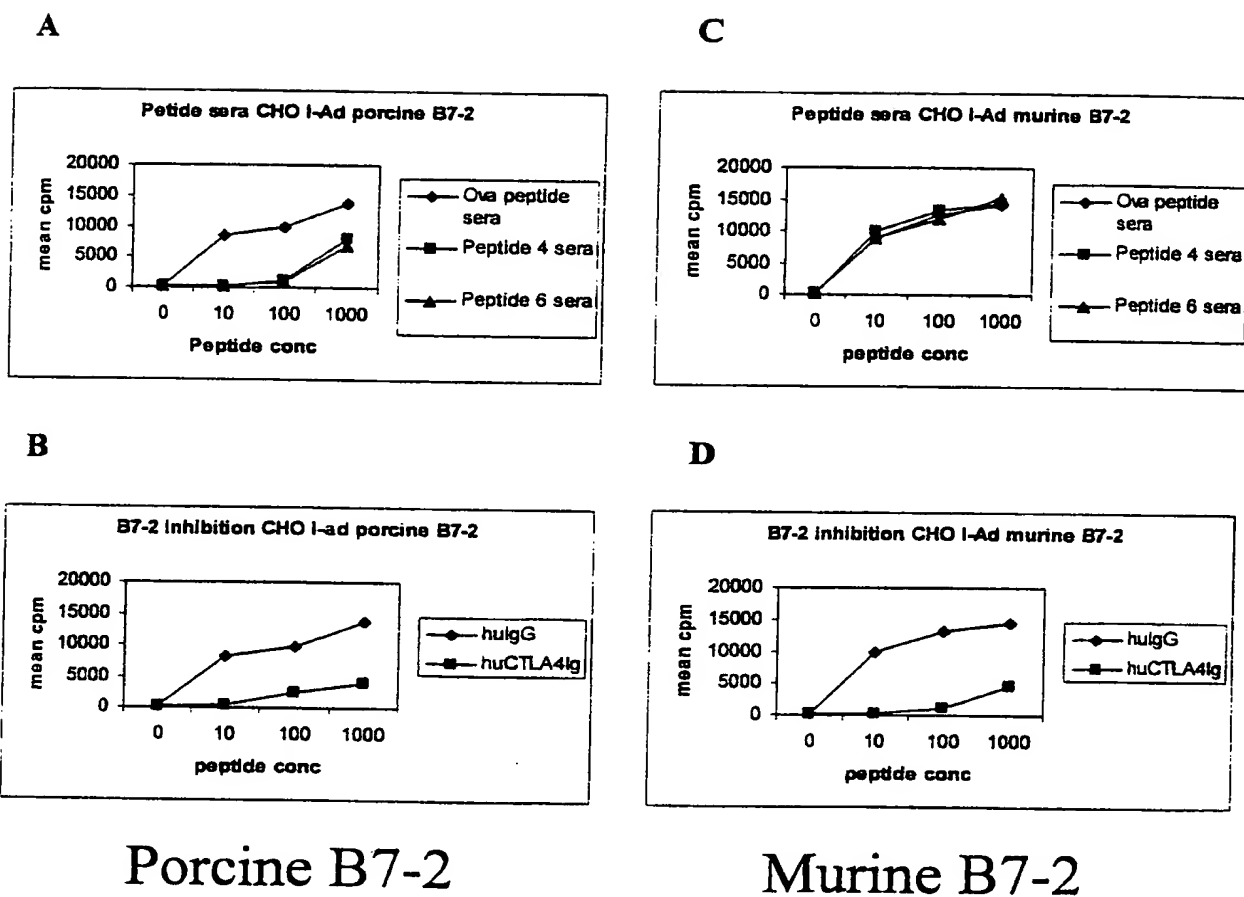
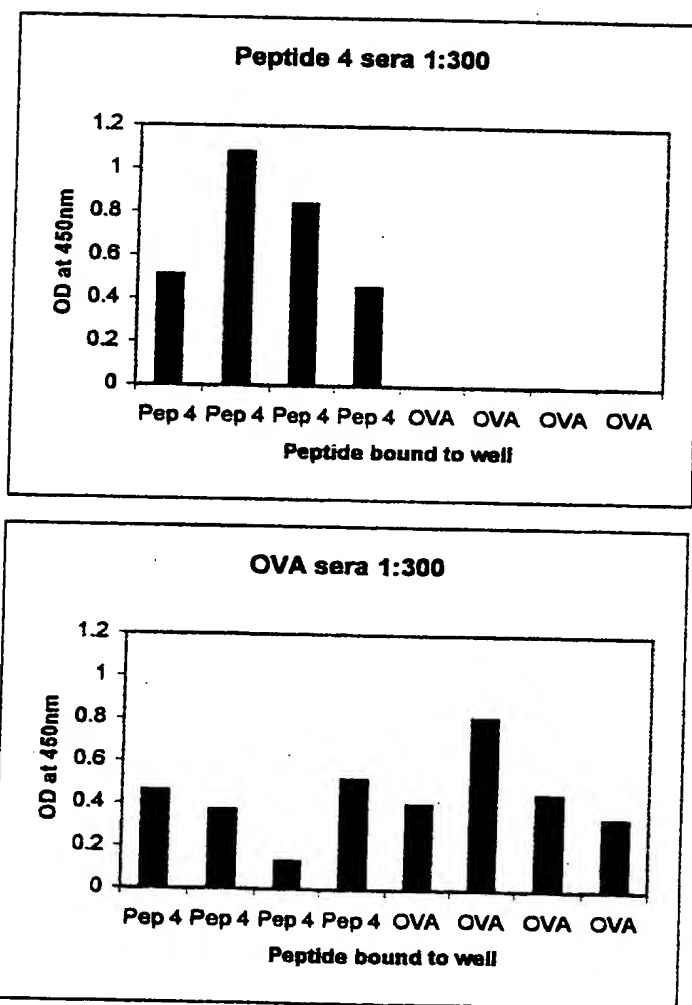


Figure 1b



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FIGURE 17a

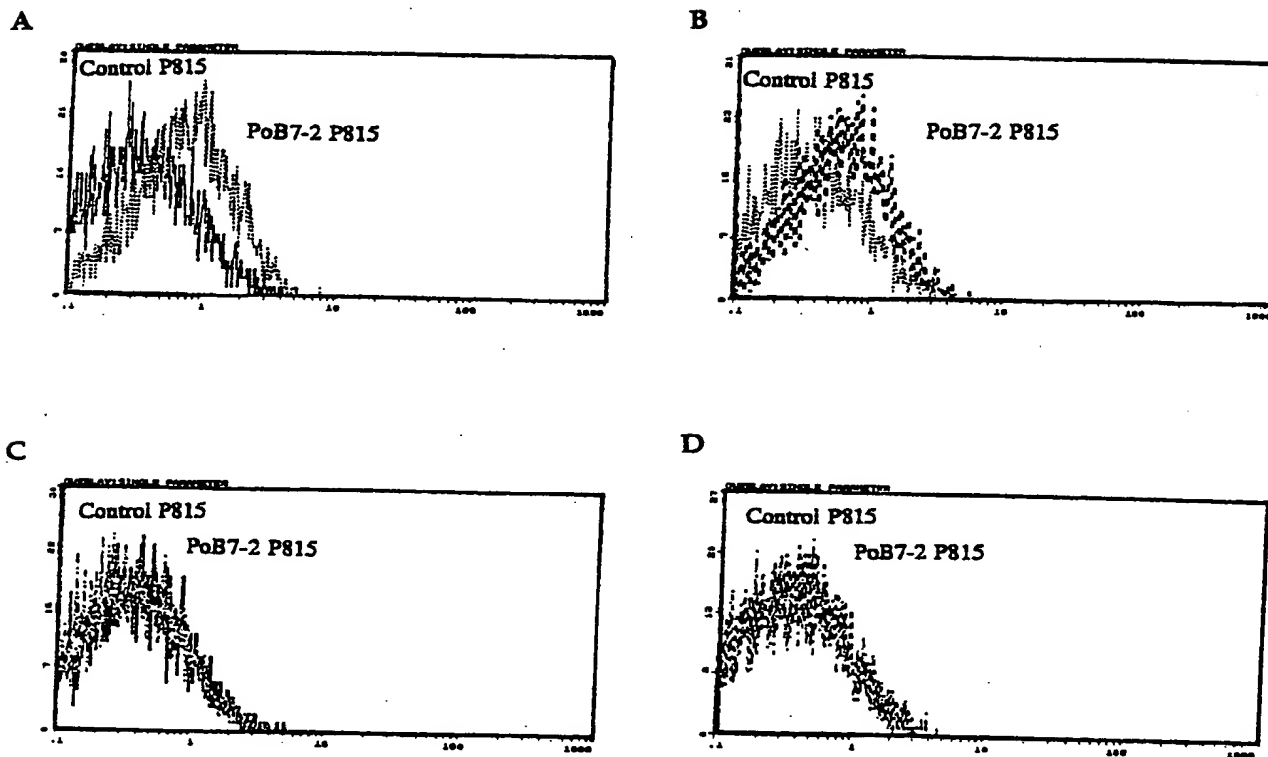


FIGURE 17b

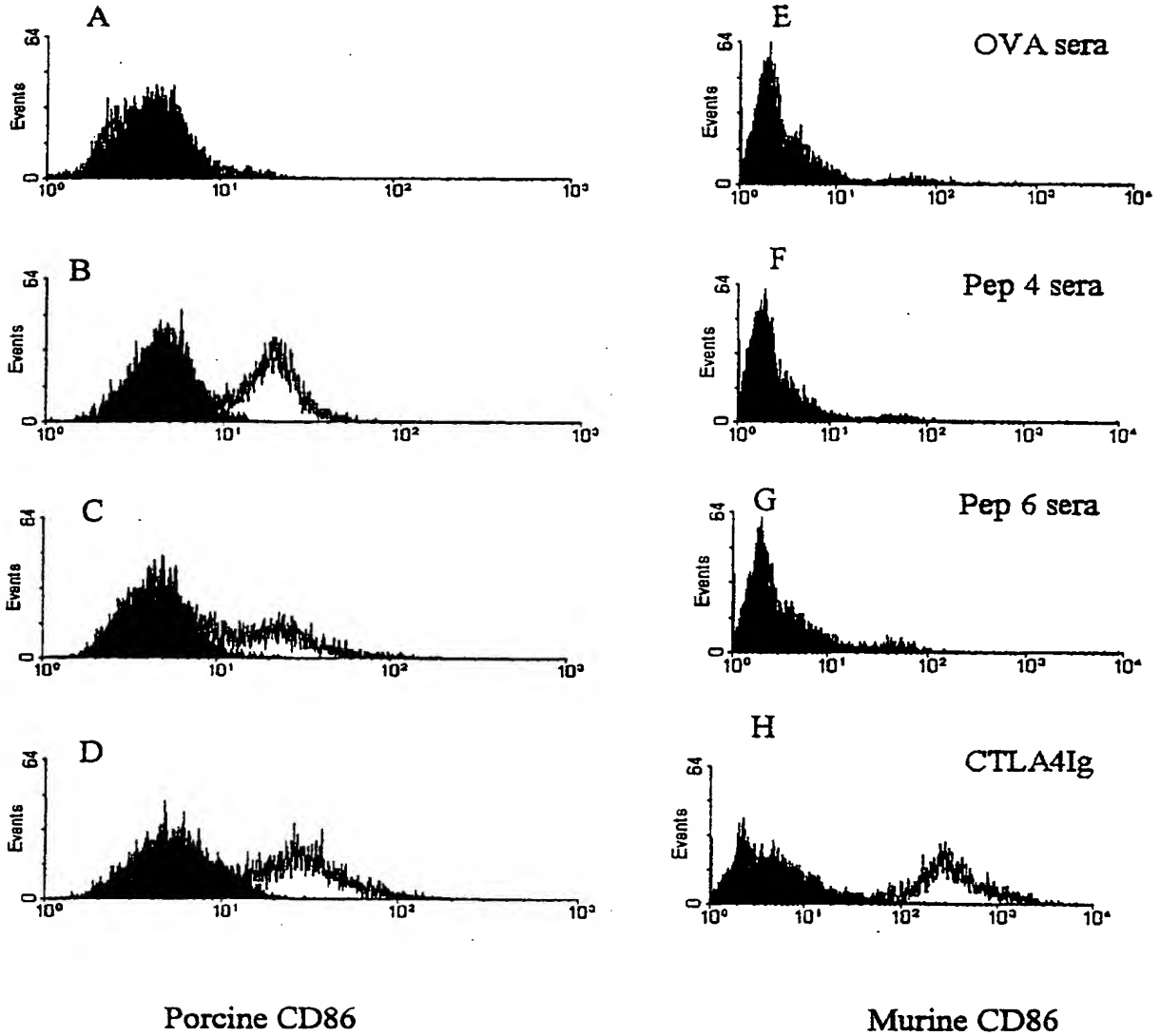


Figure 18

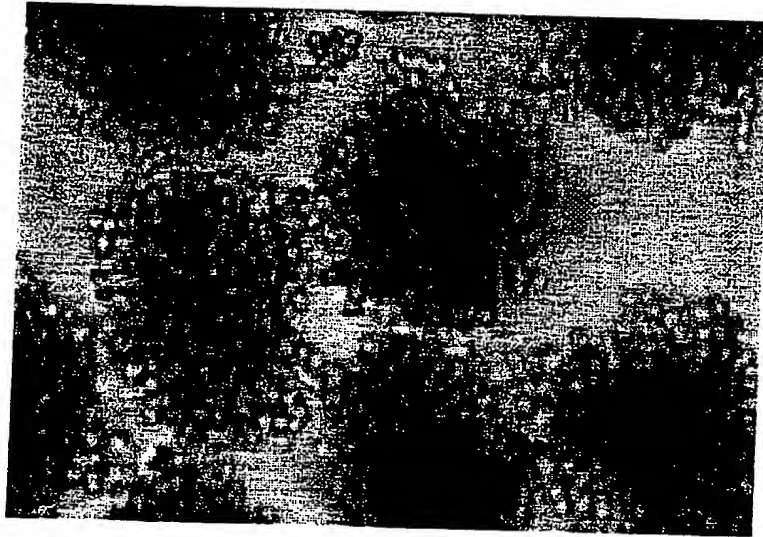


FIGURE 19

Day 1: Immunisation of C57BL-6 mice with whole ovalbumin (50 micrograms) in Complete freunds adjuvant (CFA)



Day 14: First immunisation with chimeric peptide (100 micrograms) i.v.

Day 21: Second immunisation with chimeric peptide (100 micrograms) i.v.

Day 28: Third immunisation with chimeric peptide (100 micrograms) i.v.



Day 32: Mice rendered diabetic by injection of streptozotocin i.p.

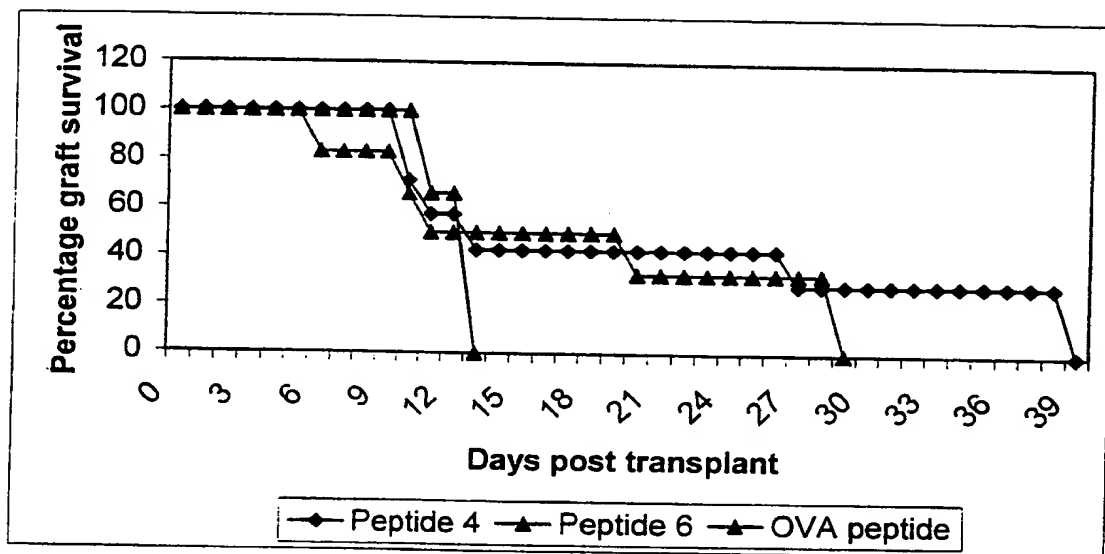


Day 36 : Transplantation of 1000 porcine pancreatic islets under the kidney capsule of diabetic mice



Day 37 onwards : Survival of islets assessed by measuring blood glucose levels

Figure 20



poCD40protein(top), human CD40 protein(bottom)

10 20 30 40 50 60 70 80
MVRLPLQCLLWGCFITAVHPEPPTSCKENQYPTNSRCCNLCPGQKLVNHCTEVTETECLPCSSSEFLATWNREKHCHQHKY
.....
MVRLPLQCVLWGCLLTAVHPEPPTACREKQYLINSQCCSLCQPGQKLVSDCTEFTETECLPCGESEFLDTWNRETHCHQHKY
10 20 30 40 50 60 70 80

90 100 110 120 130 140 150 160
CDPNLGLQVQREGTSKTDITTCVCSSEGHCTNSACESCTLHSLCFPGLVKQMATEVSDTICEPCFVGFFSNVSSASEKQCPW
.....
CDPNLGLRVQQKGTSETDTICTCEEGWHCTSEACESCVLHRSCSPGFGVKQIATGVSDTICEPCFVGFFSNVSSAFKCHPW
90 100 110 120 130 140 150 160

170 180 190 200 210 220 230 240
TSCESKGLVEQKAGTINKTDVVCQFQSRMRALVVIPITLGLFAVLLVFLCIRKVTKEQETKALHPKTERQDPVETIDLEDFP
.....
TSCETKDLVVQKAGTINKTDVVCQPDRLRALVVIPITLGLFAVLLVFLIKKVAKKPTNKAPHPKQEPQETINFPDDLPGSN
170 180 190 200 210 220 230 240

250 260 270
DSTAPVQETLHWCQPVTOEDGKESRISVQERQ
.....
TA-APVQETLHGCQPVTOEDGKESRISVQERQ
250 260 270

Figure 22

1 MVR LPLQCLL WGCFLTAVHP EPPTSCKENQ YPTNSRCCNL
41 CPPGQKLVNH CTEVTETECL PCSSEFLAT WNREKHCHQH
81 KYCDPNLGLQ VQREGTSKTD TTCVCSEGGH CTNSACESCT
121 LHSLCFPGLG VKQMATEVSD TICEPCPVGF FSNVSSASEK
161 CQPWTSCESK GLVEQRAGTN KTDVVCGFQS RMRALVVIPI
201 TLGILFAVLL VFLCIRKVTK EQETKALHPK TERQDPVETI
241 DLEDFPDSTA PVQETLHWCQ PVTQEDGKES RISVQERQ

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FIGURE 23

pig VCAM peptide copy(top), human VCAM peptide copy(bottom)

```

-20      -10      10      20      30      40      50      60|
IVVIFGASNILWMVFAVSQNVKVEIFPEDKMTAQIGDSASLTCSAPDCSSLSFSWRTQIDSPLNGKVKTNGTRSTLVMPV
... ..
MNVILGASNILWIMFAASQAFKDETTPESTRYLAQIGDSVSLTCSSTTGCESP-FFSWRTQIDSPLNGKVTNEGTTSTLTMPV
      10      20      30      40      50      60      70      80

```

```

      70      80      90      100      110      120      130      140
SFENEHSYLCTVSCGNLKGGERGIQVEITYSFPKDPEIHWSSLPVGGKPVTVRCLVPDVYPVEKLETELKKNHSMVSONFLEL
... ..
SFGNEHSYLCTATCESRKLEKGIQVEITYSFPKDPEIHLGPLEAGKPIITVKCSVADVYPFDRLEIDLKGDHLMKSQEFLED
      90      100      110      120      130      140      150      160

```

```

      150      160      170      180      190      200      210      220
IDIKSKETKSLEFTFTPTFEEDIGKAIVCQATLIIDGQPSVKTTPEKM---QVVISPKDPVISVNPSTSLQEGDSMMMTCTSE
... ..
ADRSKLETKSLEVTFTPTVEDIGKVLVCRAKLHIDEMDSVPTVRQAVKELQVVISPKNTVISVNPSTKLQEGGSVTMTCSSE
      170      180      190      200      210      220      230      240

```

```

      230      240      250      260      270      280
GLPAPQISWSKKLDNGDQQLSGNATLTLIAMRMEDSGIYVCEGVNPFVGTNRKEVELTVQ-----
... ..
GLPAPEIFWSKKLDNGNLQHLSGNATLTLIAMRMEDSGIYVCEGVNLIGKNRKEVELIVQEKPFVTEISPGPRIAAQIGDSV
      250      260      270      280      290      300      310      320

```

```

-----
MLTCSVMGCESPSFSWRTQIDSPLSGKVRSEGTNSTLTLSPVSFENEHSYLCTVTCGHKKLEKGIQELYSFPRDPEITEMSG
      330      340      350      360      370      380      390      400

```

```

-----
GLVNGSSCTVSCVKVPSVYPLDRLETELKGETILENIEFLEDTDMSLENKSLEMTFIPTIEDTGKALVCQAKLHIDDMFEF
      410      420      430      440      450      460      470      480      490

```

```

      290      300      310      320      330      340      350
-----VAPRDTTISVNPSSSTLEGGSSVNMTCSSDGFPAPKILWSKKLRDGNLEPLSENTTLTSTKMEDSGIY
... ..

```

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FIGURE 23-1

360 370 380 390 400 410 420 430
VCEGINQAGINRKEVELIIQAAPKDLQLTAFPSSESVKEGDTVIIISCTCGNVPPTLIILKKKAETGDTVLKSTDGAYTIHRAR
.....
LCEGINQAGRSRKEVELIIQVTPKDIKLTAFPSSESVKEGDTVIIISCTCGNVPETWIIILKKKAETGDTVLKSIDGAYTIRKAAQ
580 590 600 610 620 630 640 650

440 450 460 470 480 490 500 510
LADAGVYECESKNEIGLQLRSITLQVKGRESNKDYFSSELLVLYCASSLIIPAIGVITYFARKANMRGSYSLVDAQSKV
.....
LKDAGVYECESKNKVGSQQLRSITLQVQGRENNKDYFSPELLVLYFASSLIIPAIGMIITYFARKANMKGSYSLVEAQSKV
660 670 680 690 700 710 720 730

FIGURE 24

↓ (signal sequence)

IVVIFGASNI LWMVFAVSQN VKVEIFPEDK MIAQIGDSAS
LTCSAPDCES SLSFSWRTQI DSPLNGKVKT NGTRSTLVMN
PVSFENEHSY LCTVSCGNLK GERGIQVEIY SFPKDPEIHW
SSLPEVGKPV TVRCLVPDVY PVEKLEIELL KDNHSMVSQN
FLELIDIKSK ETKSLEFTFT PTEEDIGKAI VCQATLIIDG
QPSVKTTPEK MQVYISPKDP VISVNPSTSL QEGDSMMMTTC
TSEGLPAPQI SWSKKLDNGD QQLLSGNATL TLIAMRMEDS
GIYVCEGVNP VGTRNRKEVEL TVQVAPRDTT ISVNPSSTLE
EGSSVNMTCS SDGFPAPKIL WSKKLRDGNL EPLSENTTLT
LTSTKMEDSG IYVCEGINQA GINRKEVELI IQAAPKDLQL
TAFPSESVKE GDTVIIISCTC GNVPPTLIIL KKKAETGDTV
LKSTDGAYTI HRARLADAGV YECESKNEIG LQLRSITLDV
KGRESNKDYF SSELLVLYCA SSLIIPAIGV IIFYFARKANM
RGSYSLVDAQ KSKV•

FIGURE 25

translated po B7-2 Maher(top), human B7-2 translated(bottom)

10 20 30 40 50 60 70 80
MGLSNILFVMVLLLSGAASLKSQAYFNETGELPCHFTNSQNLSDDELVIFWQDQNLVLYELYRGQEKPHNVNSKYMGRTSF
.....
MGLSNILFVMAFLLSGAAPLKTQAYFNETADLPCQFANSQNSLSLVVFWQDQENLVLEVLGKERFDSVHSKYMGRTSF
10 20 30 40 50 60 70 80

90 100 110 120 130 140 150 160
DQATWTLRLHNVQIKDKGSYQCFIHHKGPGLVPIHQMSSDLLANFSQPEINLLTNHTENSVINLTCSSITQGYPEFORMY
.....
DSDSWTLRLHNLQIKDKGLYQCILHHKPTGMIRIHMNSLSVLANFSQPEIVPISNTITENVYINLTCSSITHGYPEPKRMS
90 100 110 120 130 140 150 160

170 180 190 200 210 220 230 240
MLLNTKKNSTTEHDAIMKKSQNNITELYNVSIRVSLPIPPETNVSIVCVLQLEPSKTLFLSLPCNIDAKPPVQPPVDPHILWI
.....
VLLRTKKNSTIEYDGMQKSQDNVTLEYDVSISLSVSFPDVTSNMTIFCILETDKTRLSSPFSIELEDQPPPDHIPWITAV
170 180 190 200 210 220 230 240

250 260 270 280 290 300 310 320
AALLVTVVVCGMVSFVTLRKRKKKQPGPSNECGETIKMNRKASEQTKNRAEVHERSDDAQCDVNILKTASDDNSTTDF
.....
LPTVLIICVMVFLILWKKKKRPRNSYKCGTNIMERESEQTKKREKIHIPERSDEAQRVFKSSKTSSCDKSDTCF
250 260 270 280 290 300 310 320

FIGURE 26

1 MGLSNILFVM VLLLSGAASL KSQAYFNETG ELPCHFTNSQ
41 NLSLDELVIF WQDQDNLVLY ELYRGQEKPH NVNSKYMGR
81 SFDQATWTLR LHNVQIKDKG SYQCFIHHKG PHGLVPIHQ
121 SSDLSLLANF SQPEINLLTN HTENSVINLT CSSTQGYPEP
161 QRMVLLNTK NSTTEHDADM KKSQNNITEL YNVSIRVSLP
201 IPPETNVSIV CVLQLEPSKT LLFSLPCNID AKPPVQPPVP
241 DHILWIAALL VTVVVVCGMV SFVTLRKRKK KQPGPSNECG
281 ETIKMNRKAS EQTKNRAEVH ERSDDAQCDV NILKTASDDN
321 STTDF